



# SOUTHERN SANDOVAL COUNTY ARROYO FLOOD CONTROL AUTHORITY

## CONSTRUCTION PLANS FOR

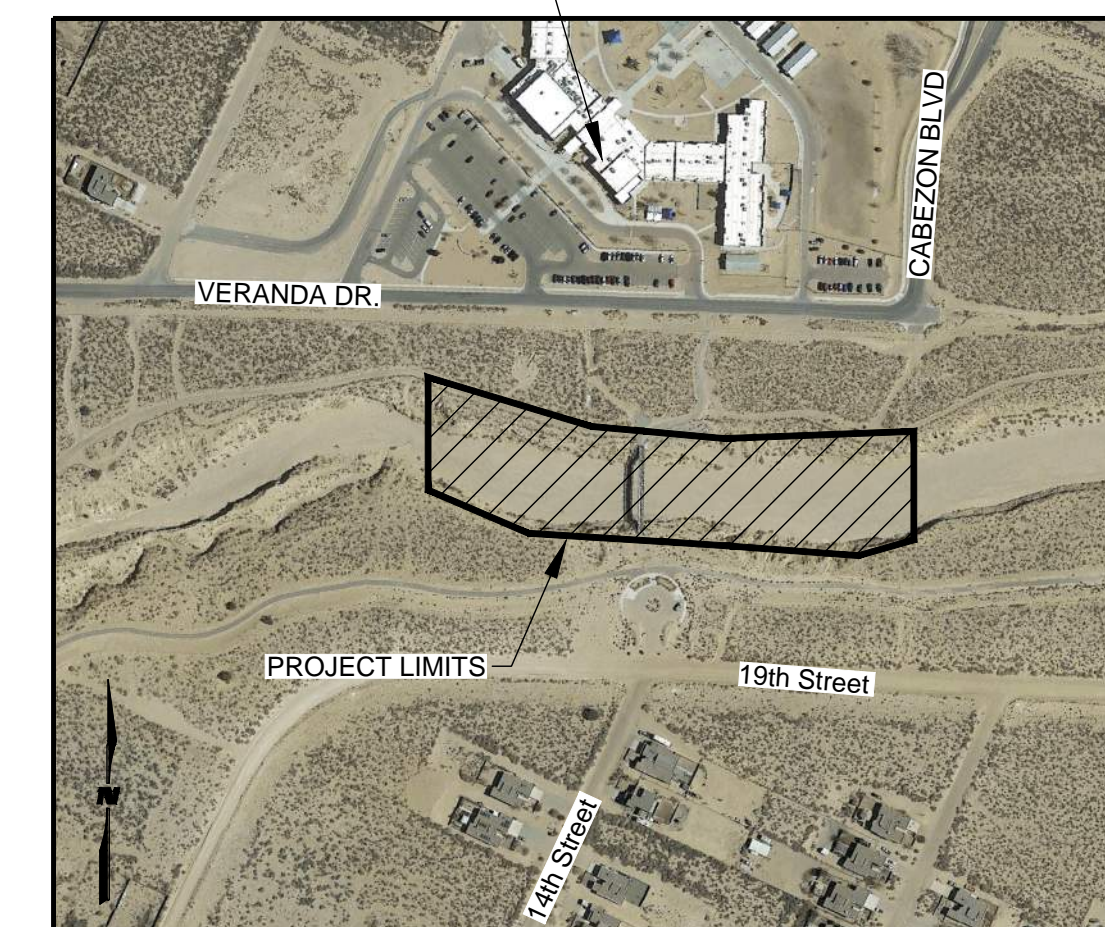


# BLACK ARROYO TRAIL BRIDGE SCOUR PROTECTION PROJECT SSCAFCA #BL\_P0038-05

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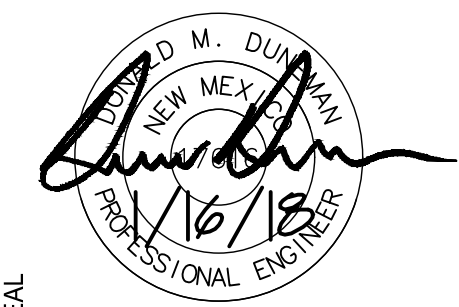
Maggie Cordova Elementary School



VICINITY MAP  
CORR ZONE ATLAS MAP NO. C-03

**WILSON  
& COMPANY**  
2800 THE AMERICAN RD. SE SUITE 100  
RIO RANCHO, NM 87124  
PHONE: 505-898-8021  
FAX: 505-898-8501  
www.wilsonco.com

CONSULTANTS



SEAL

PROJECT NAME  
**BLACK ARROYO TRAIL  
BRIDGE SCOUR  
PROTECTION PROJECT  
RIO RANCHO, NM**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 18-600-013-00  
DESIGNED BY: DMD  
DRAWN BY: JEM / MTR  
CHECKED BY: DMD  
DATE: DECEMBER 2018

SHEET TITLE  
**COVER SHEET**

SHEET NO:  
**G-001**

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**GENERAL NOTES**

- 1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA), NEW MEXICO STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION, 2006 EDITION AND THE 2014 EDITION OF THE NMDOT STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGE CONSTRUCTION.
- 2. ALL STATIONING FOR THE ROADWAYS, EMBANKMENTS AND CHANNELS REFER TO THE MEASURED HORIZONTAL DISTANCE. LEFT AND RIGHT OF CENTERLINE ARE LOOKING IN THE DIRECTION OF INCREASING STATION.
- 3. WHEN COORDINATES ARE SHOWN, HEREIN (N,E) THEY REFER TO GROUND COORDINATES. COORDINATES ARE BASED ON TRUE GROUND DISTANCES AND STATE GRID BEARINGS FROM PROJECT BENCHMARK "CP#259". THIS INFORMATION IS PROVIDED AS INFORMATION AND ALL DIMENSIONS SHALL BE CHECKED BY THE SURVEYOR
- 4. LIMITS OF WORK ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS WITHIN THE PROJECT RIGHT OF WAY. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY AGREEMENTS NECESSARY OR DAMAGE BY HIS OPERATION TO PUBLIC OR PRIVATE PROPERTY INCLUDING UTILITIES.
- 5. FILL MATERIALS FROM EXCAVATION OR BORROW WHICH REQUIRE MORE THAN ONE HANDLING PRIOR TO FINAL PLACEMENT, INCLUDING STOCKPILING AND BLENDING TO MEET GRADATION REQUIREMENTS OR STOCKPILING FOR LATER DISPOSAL, WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE FOR UNCLASSIFIED EXCAVATION. NO SEPARATE PAYMENT SHALL BE MADE FOR BLENDING OR MULTIPLE HANDLING AND FINAL PAYMENT SHALL BE MADE ON THE BASIS OF QUANTITIES REMOVED FROM ORIGINAL LOCATION.
- 6. WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST POLLUTION ABATEMENT AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED.
- 7. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION.
- 8. PLACE STRIPPING OVER EMBANKMENT SLOPES AND OTHER DISTURBED AREAS PRIOR TO SEEDING AS DIRECTED BY THE PROJECT ENGINEER. THIS WORK SHALL BE INCIDENTAL TO THE COST OF THE CLEARING AND GRUBBING ITEM. STRIPPING WILL NOT BE ALLOWED IN ANY STRUCTURAL EMBANKMENT.
- 9. MINOR CHANGES IN ELEVATIONS AND SLOPES FOR EXCAVATION AND FILL MAY BE MADE TO SUIT FIELD CONDITIONS, AS APPROVED BY THE ENGINEER.
- 10. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE.
- 11. BARRICADES, TRAFFIC CONTROL AND CONSTRUCTION SIGNS SHALL BE ERECTED AND MAINTAINED BY THE CONTRACTOR.
- 12. CLEARING AND GRUBBING MATERIAL SHALL BE STOCK PILED ON-SITE DURING CONSTRUCTION AND DISPOSED OF ONSITE AT THE DIRECTION OF THE ENGINEER. REFERENCE NOTE 9 ABOVE.
- 13. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT N.M. ONE-CALL SYSTEM, (505) 260-1990, FOR LOCATION OF EXISTING UTILITIES.
- 14. THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THESE PLANS SHALL BE KEPT CURRENT, WITHIN TWO WEEKS, AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE OWNER AND/OR PROJECT ENGINEER. THE FINAL AS-BUILT PLANS SHALL BE SUBMITTED TO THE OWNER AND PROJECT ENGINEER.
- 15. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVEMENTS, PAVEMENT MARKINGS, CURB AND GUTTER, DRIVEPADS, HANDICAP RAMPS, AND SIDEWALK DURING CONSTRUCTION.
- 16. WHEN REMOVAL OF EXISTING CURB AND GUTTER OR SIDEWALK IS REQUIRED, REMOVE TO NEAREST JOINT.
- 17. STRUCTURES SHALL BE CLEAN AT THE TIME OF FINAL PROJECT ACCEPTANCE. THIS WORK WILL BE CONSIDERED AS INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE THEREFORE.

- 18. THE CONTRACTOR SHALL INCLUDE IN HIS CONSTRUCTION SEQUENCE PROVISIONS WHICH WILL ALLOW FOR THE SAFE PASSAGE OF WATER FROM ARROYOS AND DITCHES THROUGH THE PROJECT SITE WITHOUT DAMAGE TO FACILITIES BEING CONSTRUCTED, COMPLETED FACILITIES, OR ADJACENT PRIVATE PROPERTY.
- 19. THE COST FOR REQUIRED CONSTRUCTION OF AIR QUALITY MITIGATION SHALL BE INCIDENTAL TO THE PROJECT COST, IF APPLICABLE.
- 20. ALL STORM WATER DISCHARGES FROM THE PROJECT SITE SHALL MEET THE REQUIREMENTS OF THE REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AS WELL AS APPLICABLE STATE AND LOCAL REGULATIONS.
- 21. SEVEN (7) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO PROJECT ENGINEER A DETAILED CONSTRUCTION SCHEDULE.
- 22. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY GRAFFITI FROM ALL EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
- 23. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART P.
- 24. THE CONTRACTOR WILL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS, INCLUDING, NOT LIMITED TO HAZARDOUS WASTE AT DISPOSAL SITES APPROVED BY GOVERNMENTAL AGENCIES REGULATING THE DISPOSAL OF SUCH MATERIALS.
- 25. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL CONSTRUCTION SIGNING UNTIL PROJECT HAS BEEN ACCEPTED BY SSCAFCA.
- 26. UNCLASSIFIED EXCAVATION PLACED AS FILL, AESTHETIC FILL, STRUCTURAL FILL SHALL BE 95% MAX. DRY DENSITY PER ASTM D-1557 AND OPTIMUM MOISTURE ±2%

- THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED:
- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
  - BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
  - TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE ENGINEER.
  - SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
  - IF CURB IS DEPRESSED FOR A DRIVEPAD, THE DRIVEPAD SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.
  - ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

- LEGEND**
- - - - - EXISTING TRAIL
  - EXISTING FENCE
  - - - - - EXISTING MAJOR CONTOUR
  - - - - - EXISTING MINOR CONTOUR
  - PROPOSED MAJOR CONTOUR
  - PROPOSED MINOR CONTOUR

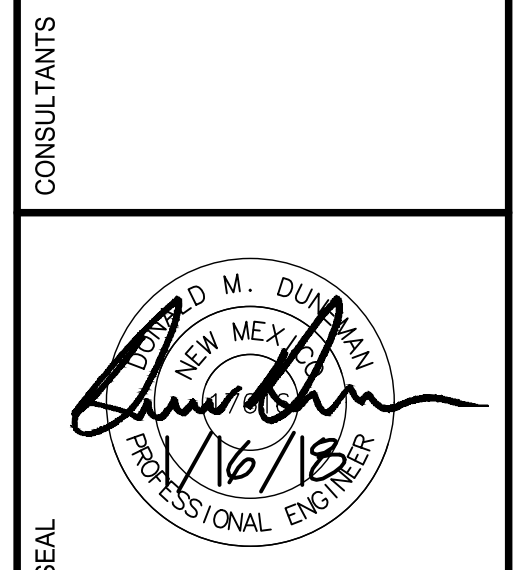
**EROSION AND SEDIMENT CONTROL NOTES**

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL NECESSARY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, OBTAINING AN NPDES PERMIT PRIOR TO CONSTRUCTION, FILLING OUT THE NOTICE OF INTENT (NOI) APPLICATION, AND FILLING OUT THE NOTICE OF TERMINATION (NOT) APPLICATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION OF AND INSPECTION REPORTS FOR THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL SUBMIT THE SWPPP WITH THE PROPOSED CONSTRUCTION STAGING AREA AND TEMPORARY SANITARY FACILITIES CLEARLY SHOWN. ANY CHECK DAMS, SILT FENCES, OR OTHER BEST MANAGEMENT PRACTICES (BMPs) THAT ARE REQUIRED IN THE APPROVED SWPPP SHALL BE INCLUDED IN AND ARE INCIDENTAL TO THE SWPPP BID AMOUNT.
- 2. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED SWPPP ON-SITE AT ALL TIMES, AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN.
- 3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM THE REGULATORY AGENCIES.
- 4. THE CONTRACTOR SHALL EITHER PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR INSTALL BMPs ACCORDING TO NPDES REQUIREMENTS TO PREVENT DISCHARGE OF EXCAVATED MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY DURING A RAIN OR WIND EVENT. COST IS INCIDENTAL TO THE CONTRACT.
- 5. THE CONTRACTOR SHALL IMPLEMENT THE APPROVED SWPPP AND ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- 6. THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING BMPs IDENTIFIED IN THE APPROVED SWPPP IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS AS SPECIFIED IN THE SWPPP.
- 7. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED. WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR.
- 8. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING. WHEN CONSTRUCTION ACTIVITIES CEASE AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME WITHIN 14 DAYS, STABILIZATION MEASURES MUST BE INITIATED. UNLESS INDICATED OTHERWISE ON THESE PLANS OR ON THE LANDSCAPING PLAN, NATIVE GRASS SEEDING SHALL BE CLASS A SEEDING PER SECTION 1012 OF THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHARTER, LATEST EDITION.
- 9. ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNATED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.) GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMITS REQUIRED TO HAUL OR DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDE GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINTS, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM AT 505-827-9329.
- 11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER. CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.
- 12. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION.
- 13. WHERE STORM INLETS ARE SUSCEPTIBLE TO INFLOW OF SILT OR DEBRIS FROM CONSTRUCTION ACTIVITIES, PROTECTION SHALL BE PROVIDED ON THEIR UPSTREAM SIDE UTILIZING BMPs ACCORDING TO NPDES REQUIREMENTS. COST IS INCIDENTAL TO THE CONTRACT.

PROJECT BID ALTERNATES			
#	SPEC SEC NO.	UNIT	DESCRIPTION
ALT 1	STS 519	LS	SHOTCRETE TINT - SAN DIEGO BUFF COLOR

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**WILSON & COMPANY**  
 2600 THE AMERICAN RD. SE SUITE 100  
 RIO RANCHO, NM 87124  
 PHONE: 505-898-8021  
 FAX: 505-898-8501  
 www.wilsonco.com



**BLACK ARROYO TRAIL  
 BRIDGE SCOUR  
 PROTECTION PROJECT  
 RIO RANCHO, NM**

REV.	DATE	DESCRIPTION	BY

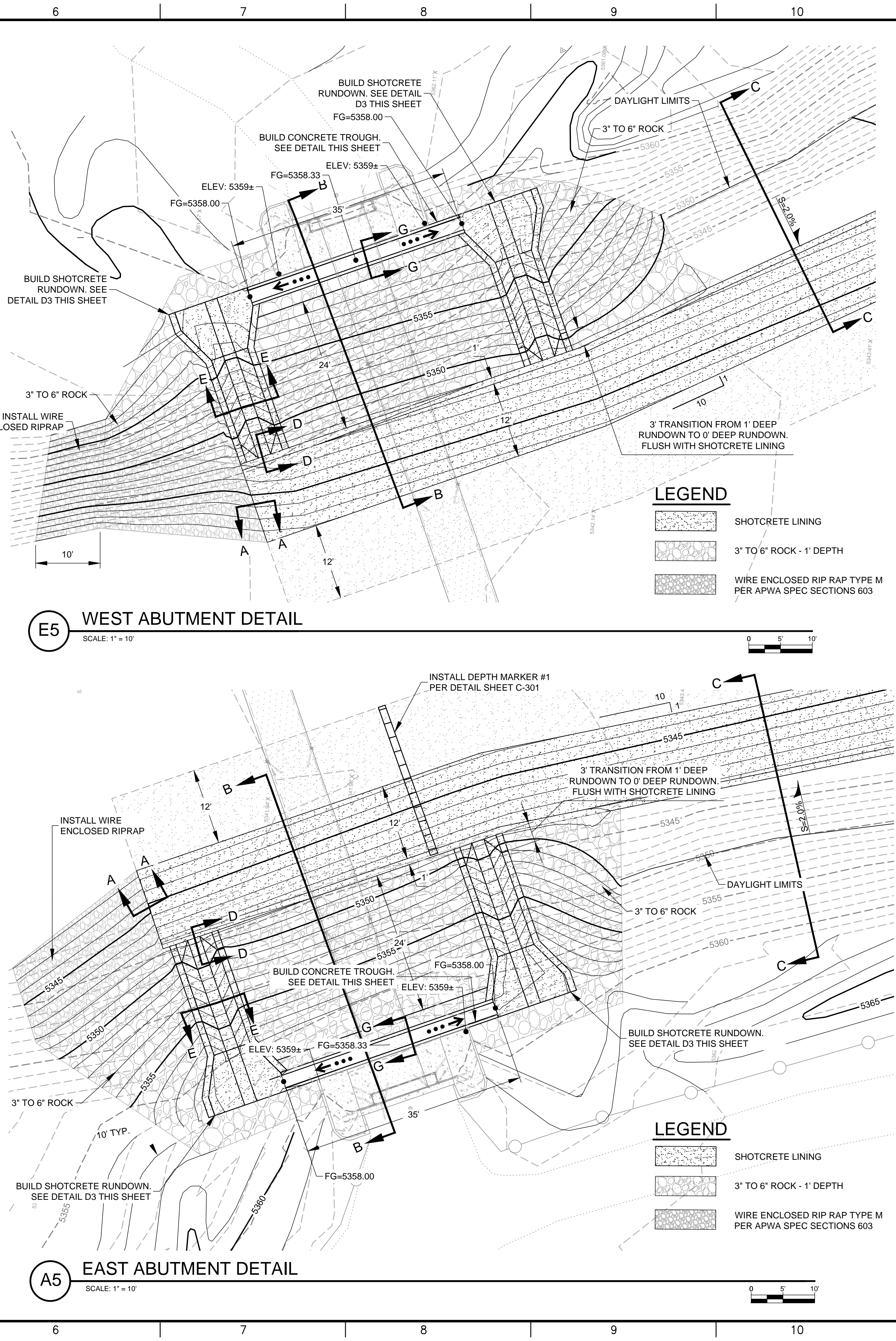
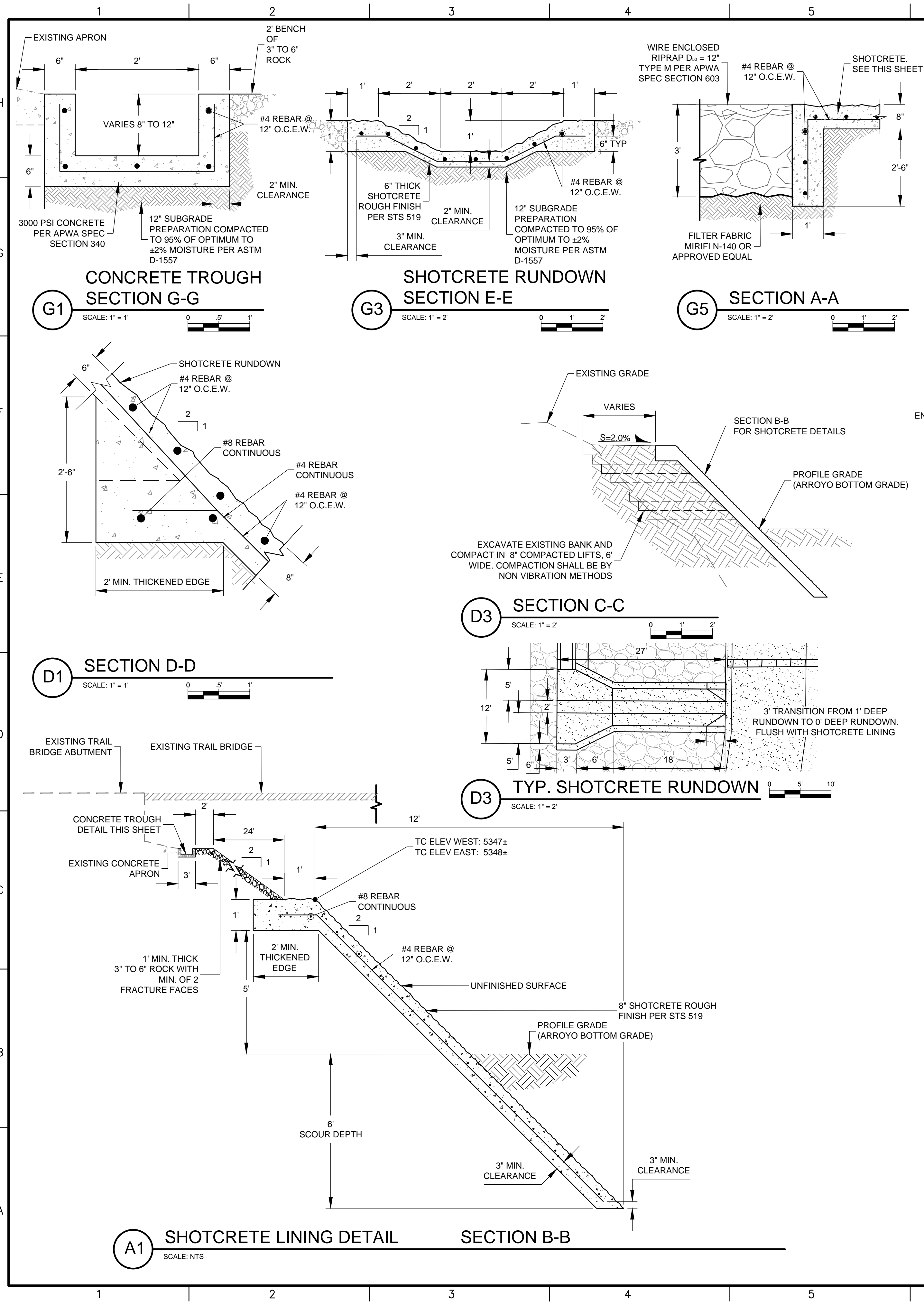
PROJECT NO: 18-600-013-00  
 DESIGNED BY: DMD  
 DRAWN BY: JEM / MTR  
 CHECKED BY: DMD  
 DATE: DECEMBER 2018

SHEET TITLE  
**GENERAL NOTES**

SHEET NO:  
**G-002**



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**LEGEND**

- SHOTCRETE LINING
- 3" TO 6" ROCK - 1' DEPTH
- WIRE ENCLOSED RIP RAP TYPE M PER APWA SPEC SECTIONS 603

**LEGEND**

- SHOTCRETE LINING
- 3" TO 6" ROCK - 1' DEPTH
- WIRE ENCLOSED RIP RAP TYPE M PER APWA SPEC SECTIONS 603

**WILSON & COMPANY**  
2600 THE AMERICAN RD. SE SUITE 100  
RIO RANCHO, NM 87124  
PHONE: 505-898-8021  
FAX: 505-898-8501  
www.wilsonco.com

CONSULTANTS  
SEAL  
D. M. DURAN  
NEW MEXICO  
PROFESSIONAL ENGINEER  
16/18

PROJECT NAME  
**BLACK ARROYO TRAIL  
BRIDGE SCOUR  
PROTECTION PROJECT  
RIO RANCHO, NM**

REV.	DATE	DESCRIPTION	BY

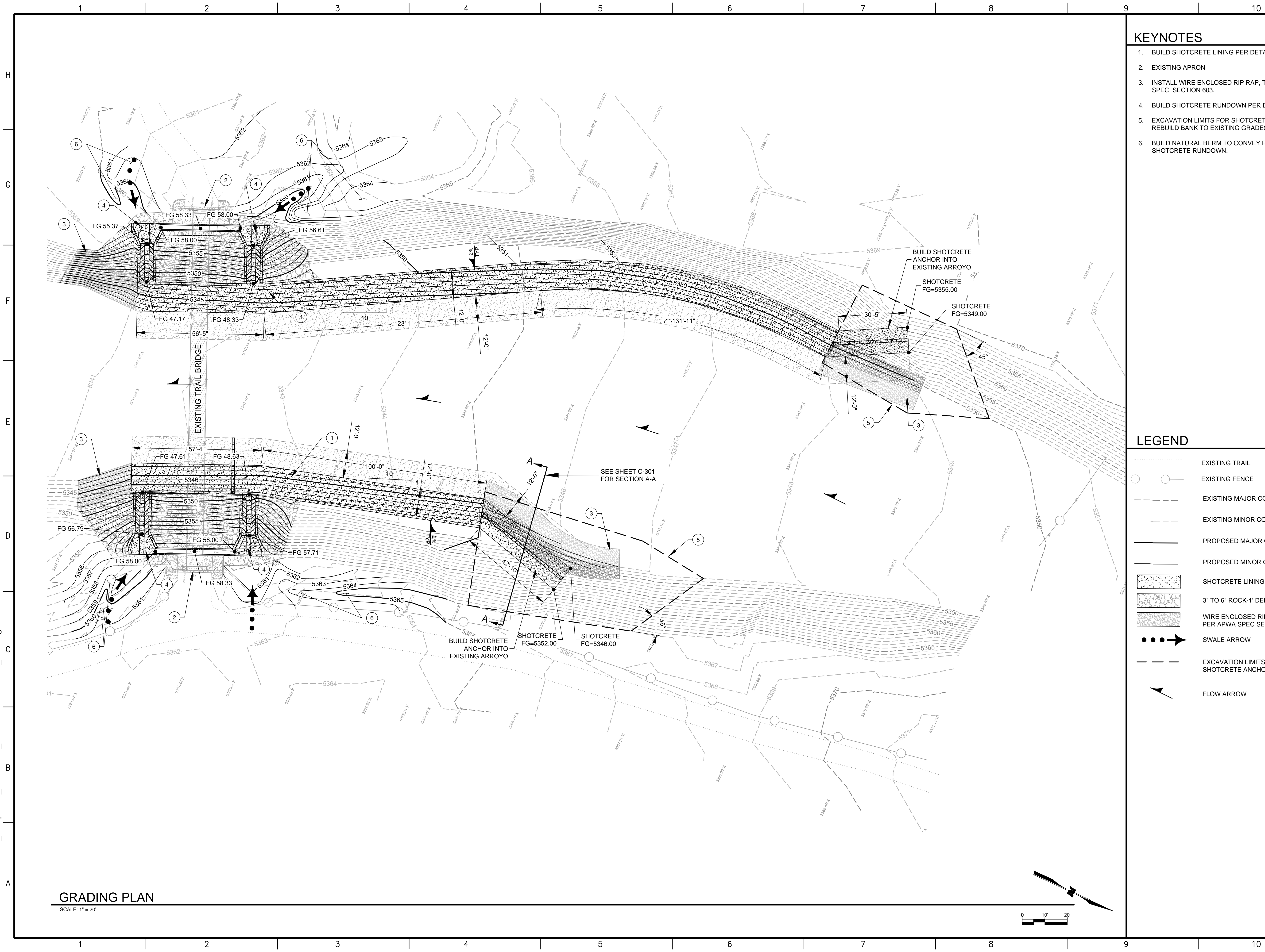
PROJECT NO: 18-600-013-00  
DESIGNED BY: DMD  
DRAWN BY: JEM / MTR  
CHECKED BY: DMD  
DATE: DECEMBER 2018

SHEET TITLE  
**DETAILS**

SHEET NO:  
**C-201**



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**GRADING PLAN**

SCALE: 1" = 20'

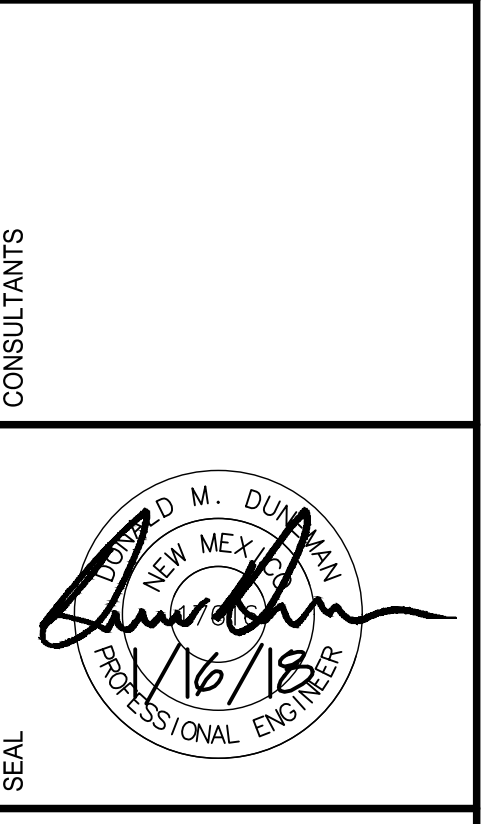
**KEYNOTES**

1. BUILD SHOTCRETE LINING PER DETAIL SHEET C-201.
2. EXISTING APRON
3. INSTALL WIRE ENCLOSED RIP RAP, TYPE M PER APWA SPEC SECTION 603.
4. BUILD SHOTCRETE RUNDOWN PER DETAIL SHEET C-201.
5. EXCAVATION LIMITS FOR SHOTCRETE ANCHOR. REBUILD BANK TO EXISTING GRADES.
6. BUILD NATURAL BERM TO CONVEY FLOWS TOWARD SHOTCRETE RUNDOWN.

**LEGEND**

- EXISTING TRAIL
- EXISTING FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- SHOTCRETE LINING
- 3" TO 6" ROCK-1' DEPTH
- WIRE ENCLOSED RIP RAP TYPE M PER APWA SPEC SECTION 603
- SWALE ARROW
- EXCAVATION LIMITS FOR SHOTCRETE ANCHOR
- FLOW ARROW

**WILSON & COMPANY**  
 2600 THE AMERICAN RD. SE SUITE 100  
 RIO RANCHO, NM 87124  
 PHONE: 505-898-8021  
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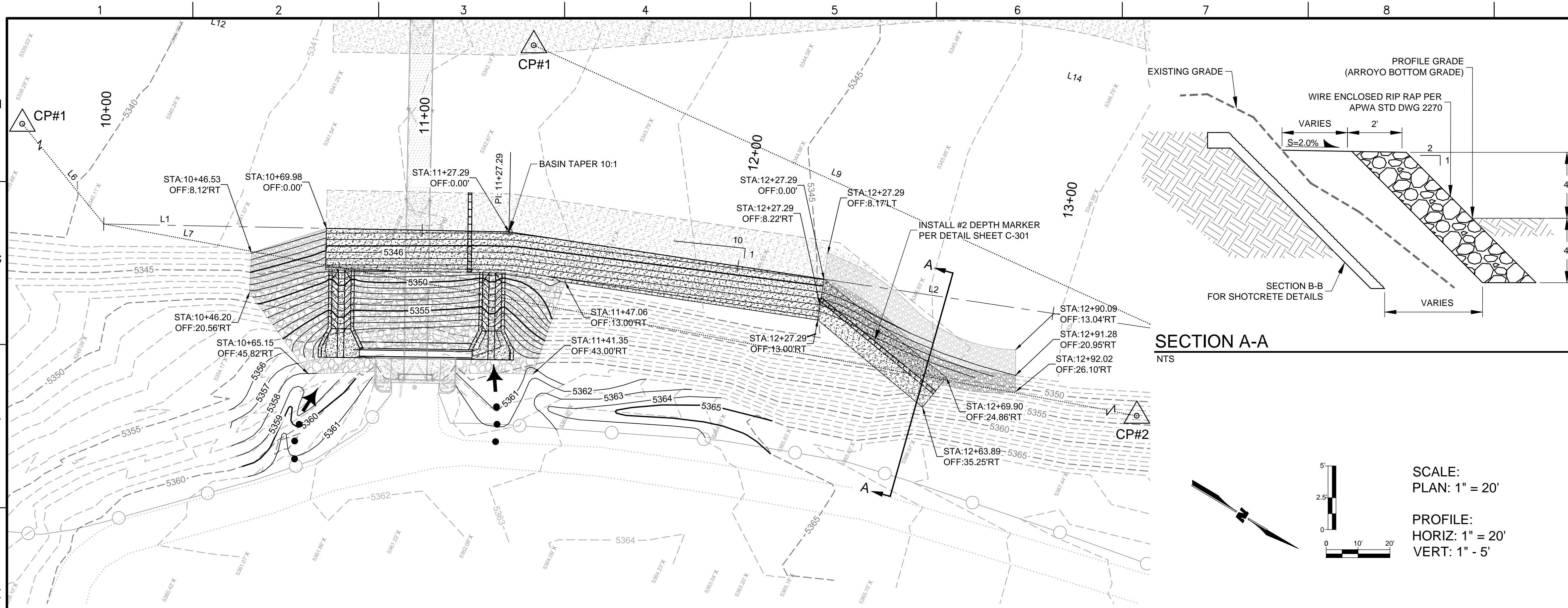
**PROJECT NAME**  
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SHEET TITLE  
**GRADING PLAN**

SHEET NO:  
**C-202**



BLACK ARROYO PLAN - EAST BANK

TABLES:

ALIGNMENT TABLE		
LINE NUMBER	LENGTH	DIRECTION
L1	127.286	N23° 50' 25.80" W
L2	207.801	N16° 29' 54.14" W

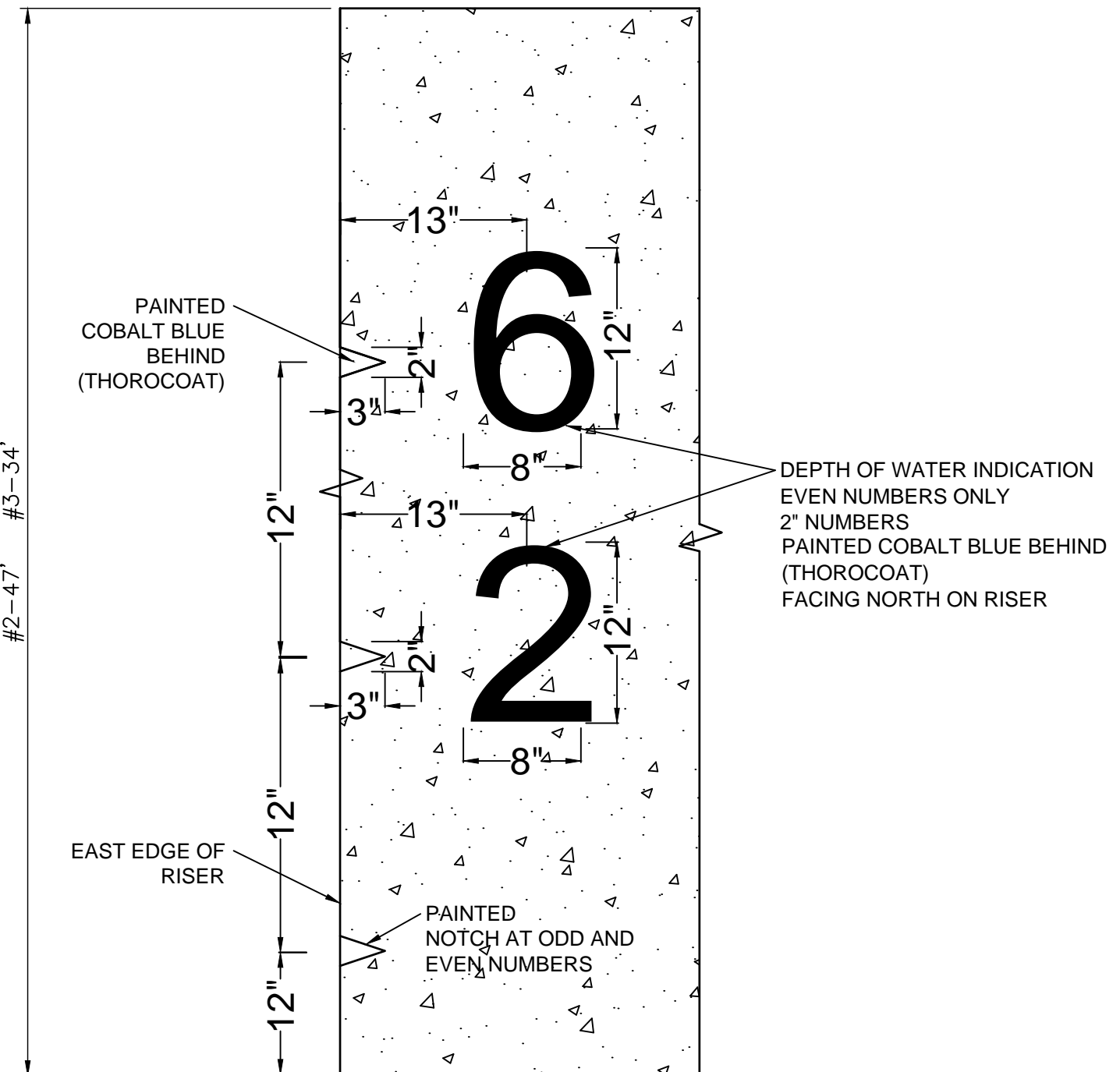
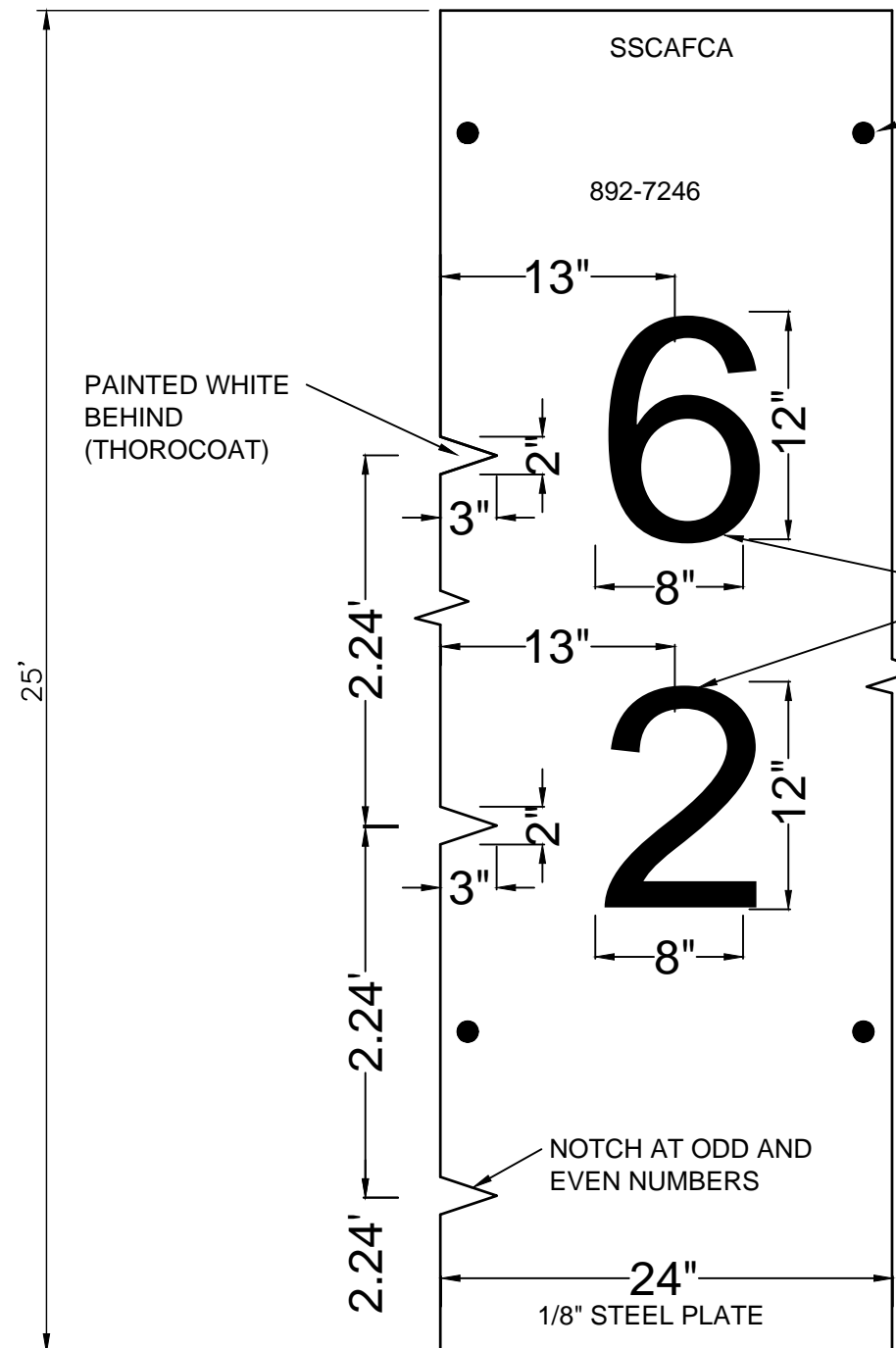
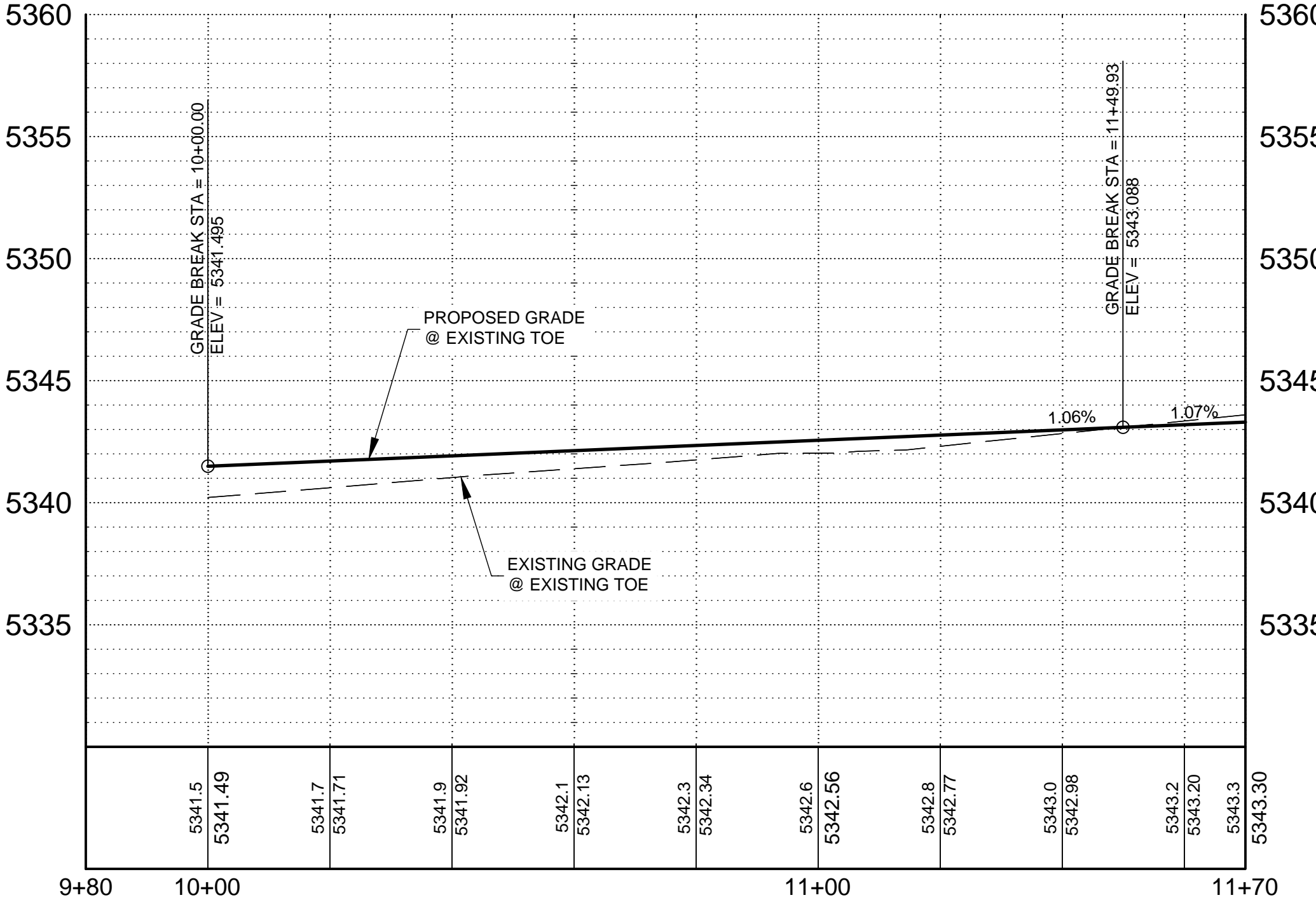
HORIZONTAL CONTROL POINT TABLE			
CONTROL POINT #	NORTHING	EASTING	ELEVATION
CP # 1	15140428.30	1505896.05	5354.90
CP # 2	1541631.41	1505745.72	5383.76

HORIZONTAL CONTROL LINE TABLE		
LINE NUMBER	LENGTH	DIRECTION
L6	239.891	N25° 46' 15.96" E
L7	1019.395	N14° 27' 52.77" W
L8	686.715	S12° 07' 06.99" E
L9	531.738	S00° 39' 56.62" E

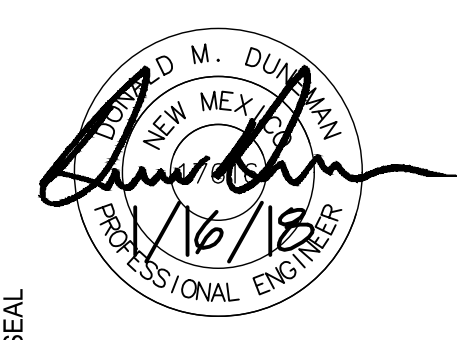
LEGEND

- SHOTCRETE LINING
- 3" TO 6" ROCK-1' DEPTH
- WIRE ENCLOSED RIP RAP TYPE M PER APWA SPEC SECTION 603

BLACK ARROYO PROFILE - EAST BANK



**WILSON & COMPANY**  
 2600 THE AMERICAN RD. SE SUITE 100  
 RIO RANCHO, NM 87124  
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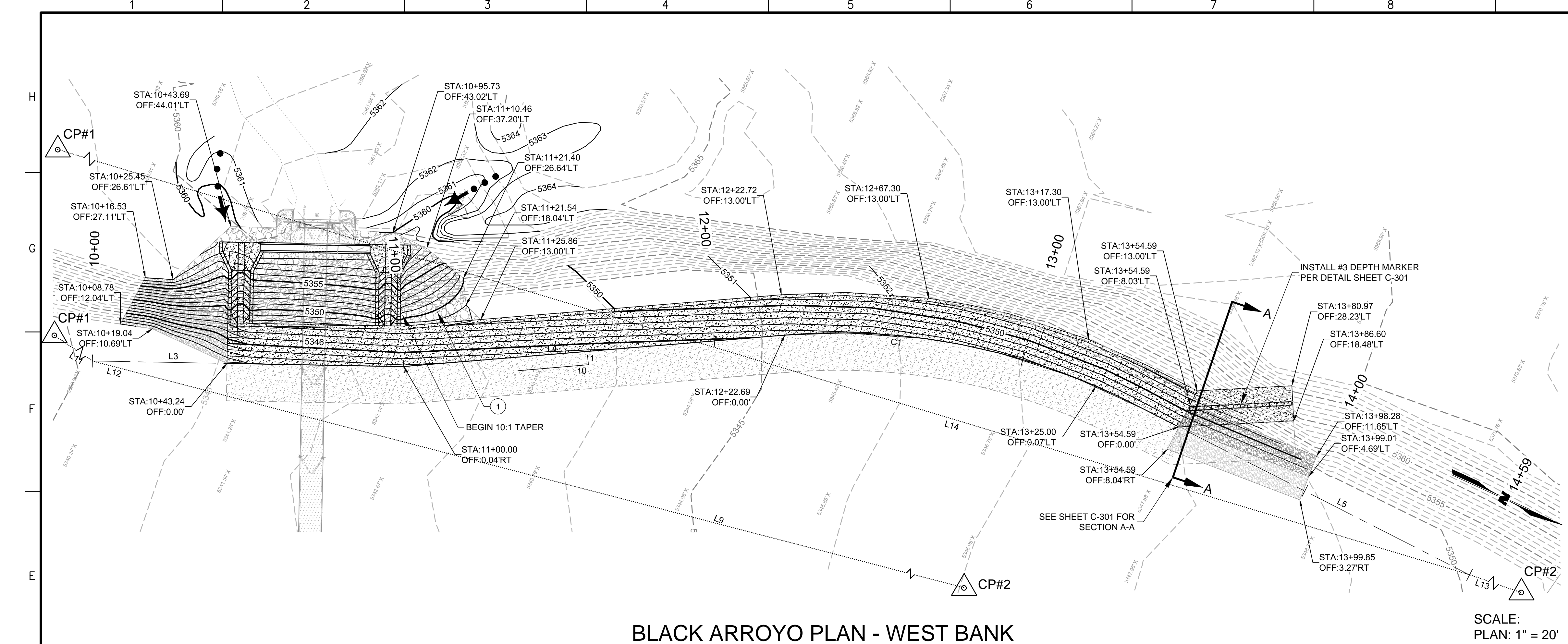
PROJECT NO: 18-600-013-00  
 DESIGNED BY: DMD  
 DRAWN BY: JEM / MTR  
 CHECKED BY: DMD  
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SHEET TITLE  
**EAST WALL  
 PLAN & PROFILE**

SHEET NO:  
**C-301**

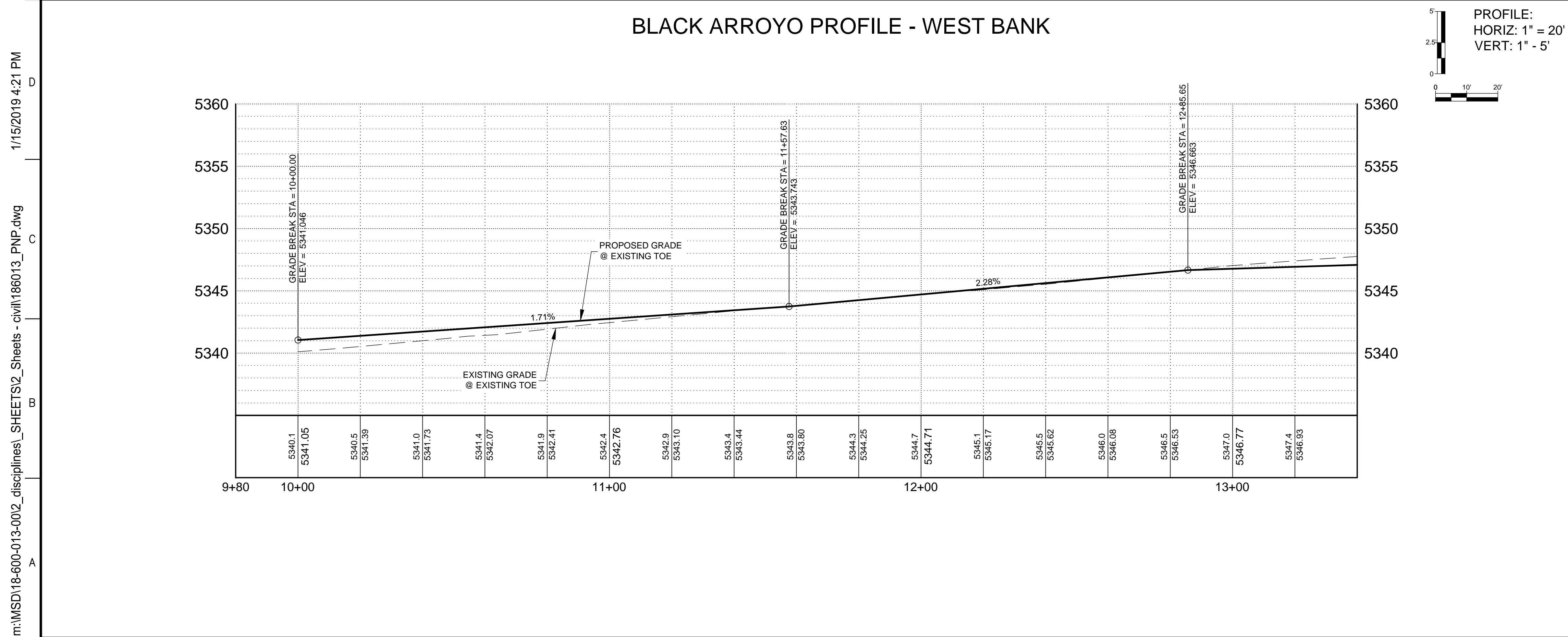
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BLACK ARROYO PLAN - WEST BANK

SCALE:  
PLAN: 1" = 20'



BLACK ARROYO PROFILE - WEST BANK

PROFILE:  
HORIZ: 1" = 20'  
VERT: 1" = 5'

TABLES:

ALIGNMENT LINE TABLE		
LINE NUMBER	LENGTH	DIRECTION
L3	100.002	N23° 58' 08.83" W
L4	122.695	N29° 43' 33.29" W
L5	104.731	N01° 58' 02.77" E

ALIGNMENT CURVE TABLE			
LINE NUMBER	LENGTH	RADIUS	DELTA
C1	131.927	215.092	035.1425

HORIZONTAL CONTROL POINT TABLE			
CONTROL POINT #	NORTHING	EASTING	ELEVATION
CP # 1	15140428.30	1505896.05	5354.90
CP # 2	1541631.41	1505745.72	5383.76

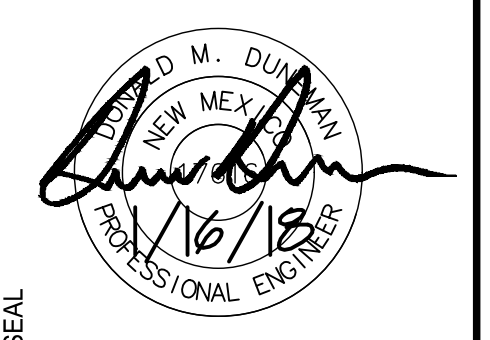
HORIZONTAL CONTROL LINE TABLE		
LINE NUMBER	LENGTH	DIRECTION
L11	216.374	N08° 21' 56.62" E
L12	1005.613	N10° 24' 57.59" W
L13	562.276	S05° 50' 17.78" E
L14	650.455	S08° 13' 55.06" E

LEGEND

- SHOTCRETE LINING
- 3" TO 6" -1" DEPTH
- WIRE ENCLOSED RIP RAP TYPE M PER APWA SPEC SECTION 603

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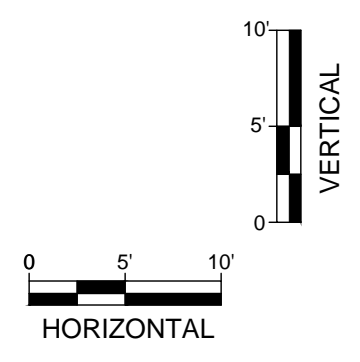
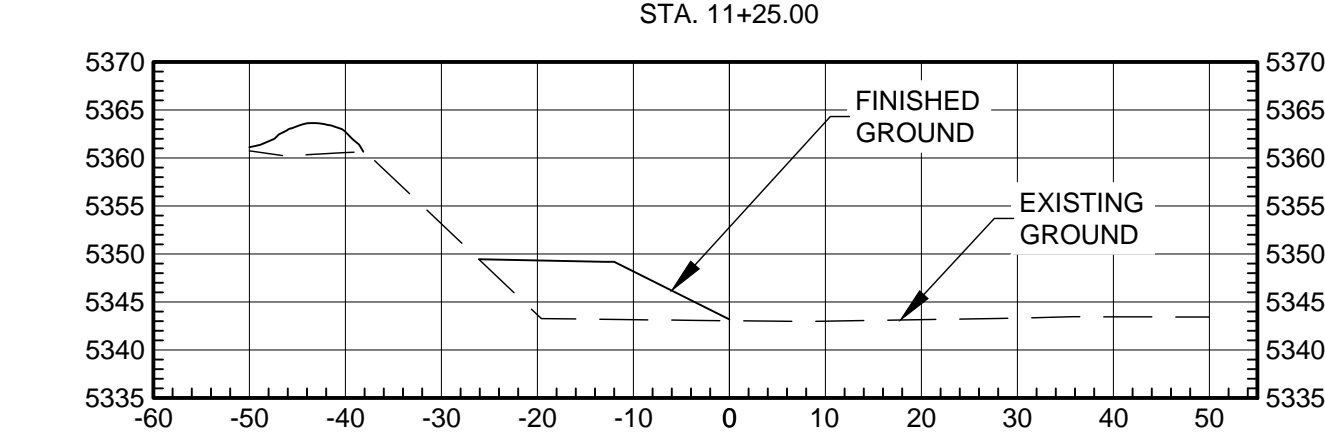
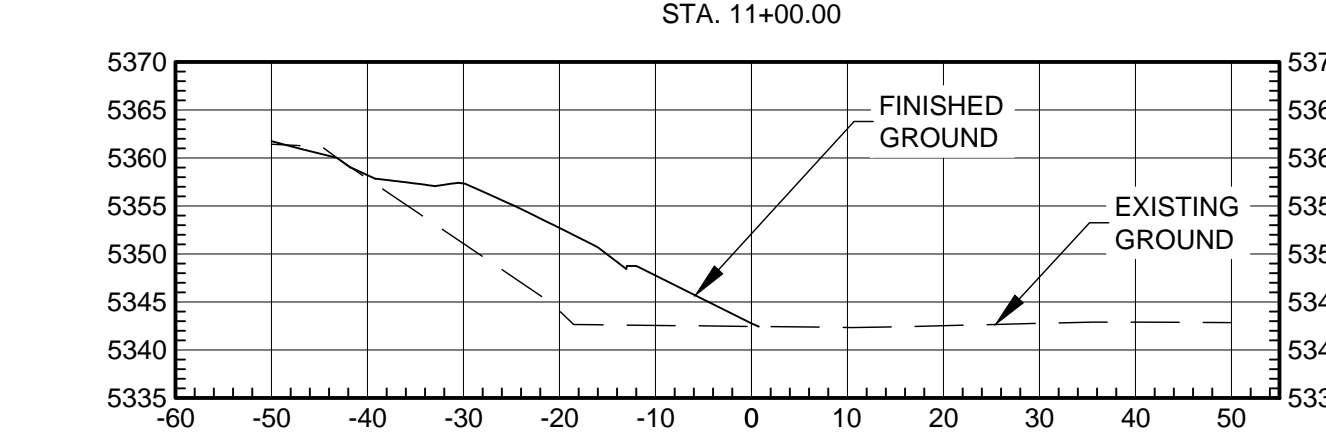
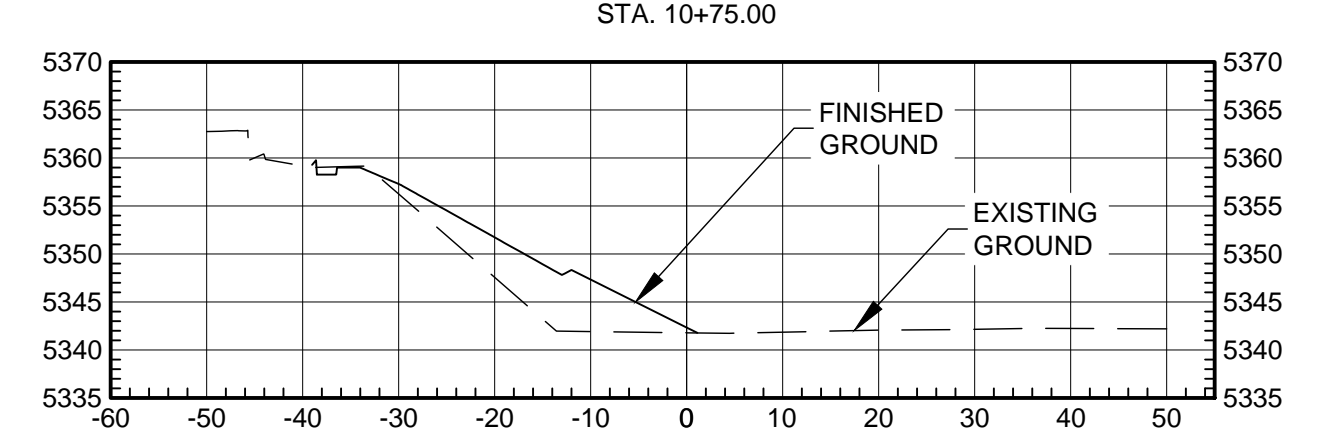
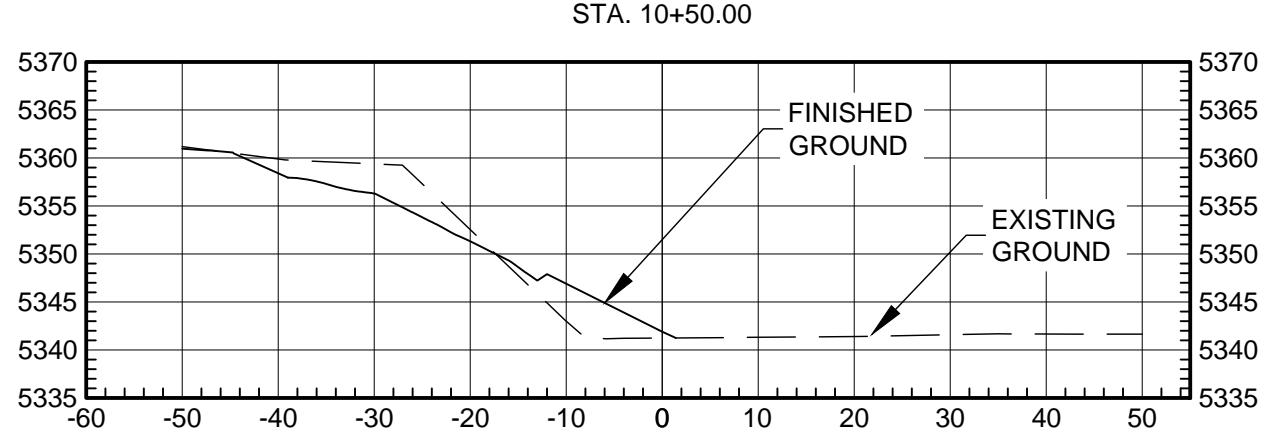
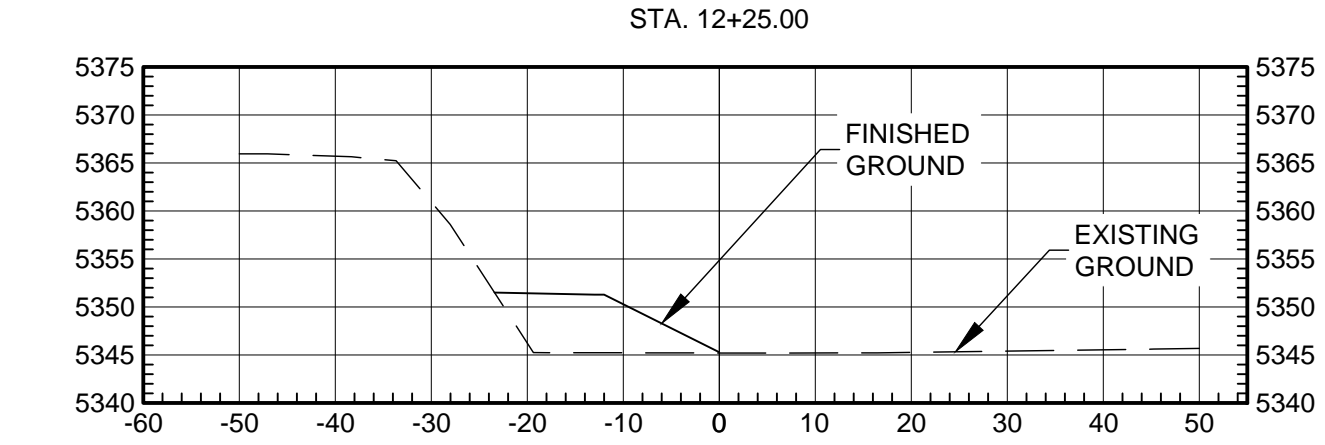
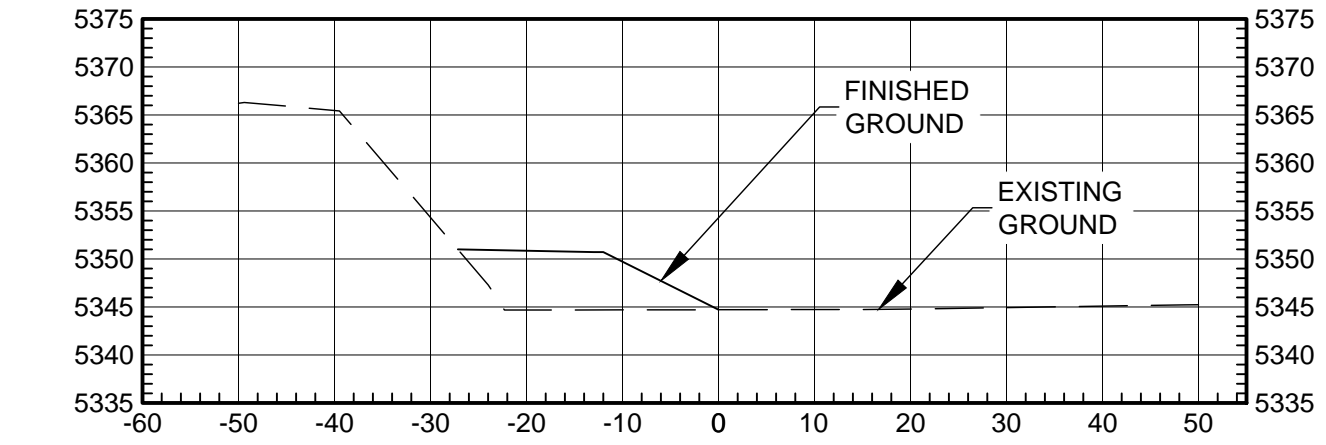
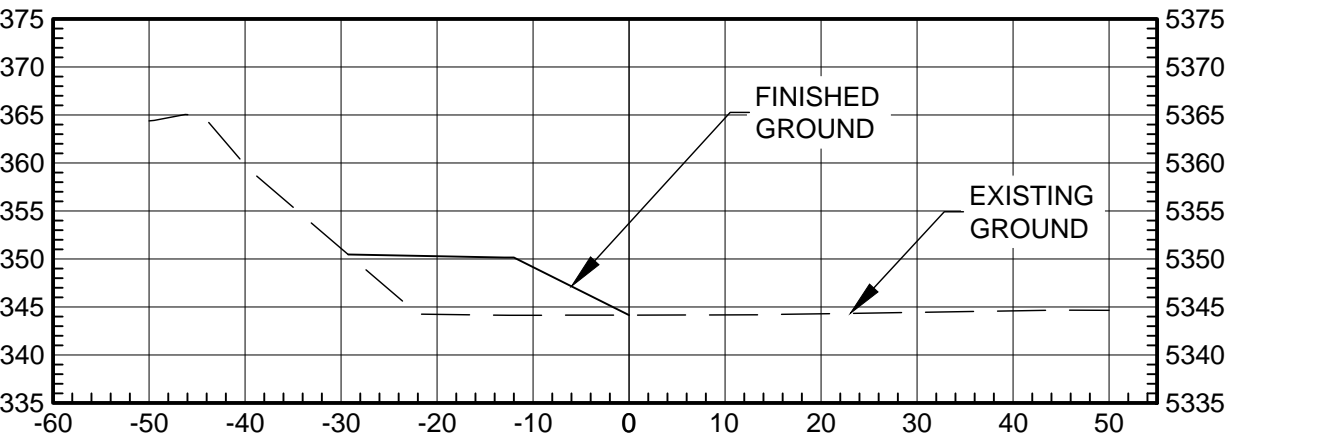
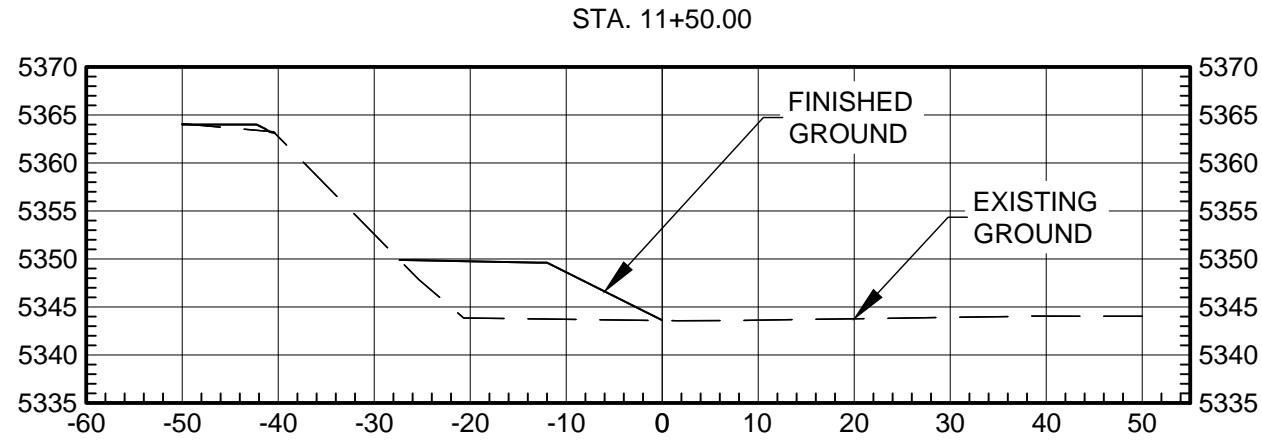
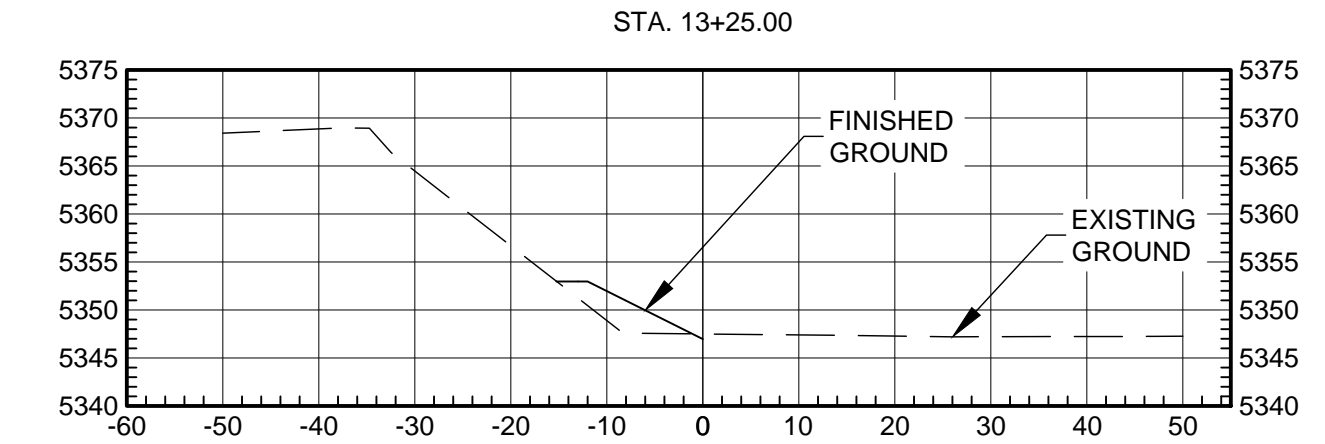
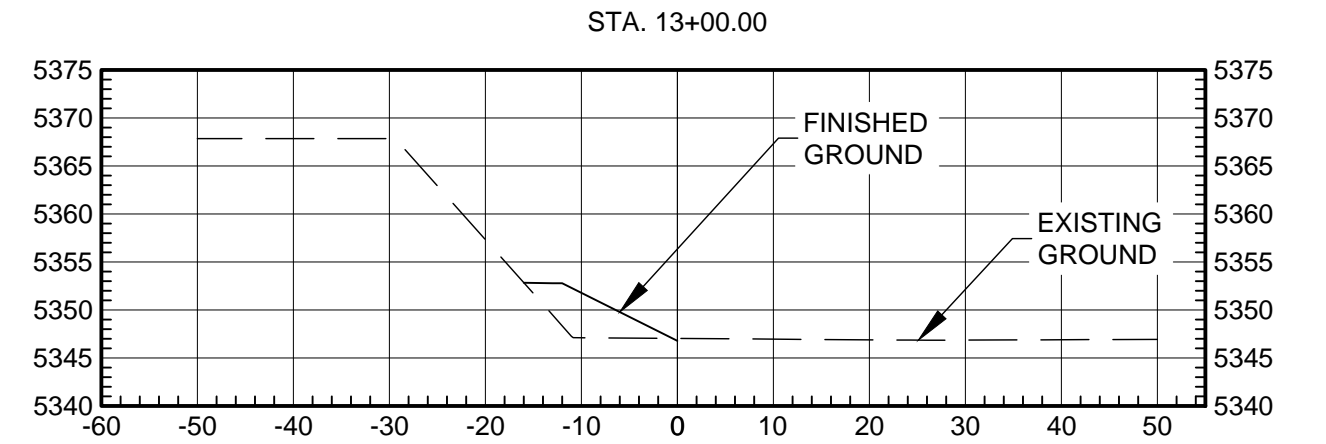
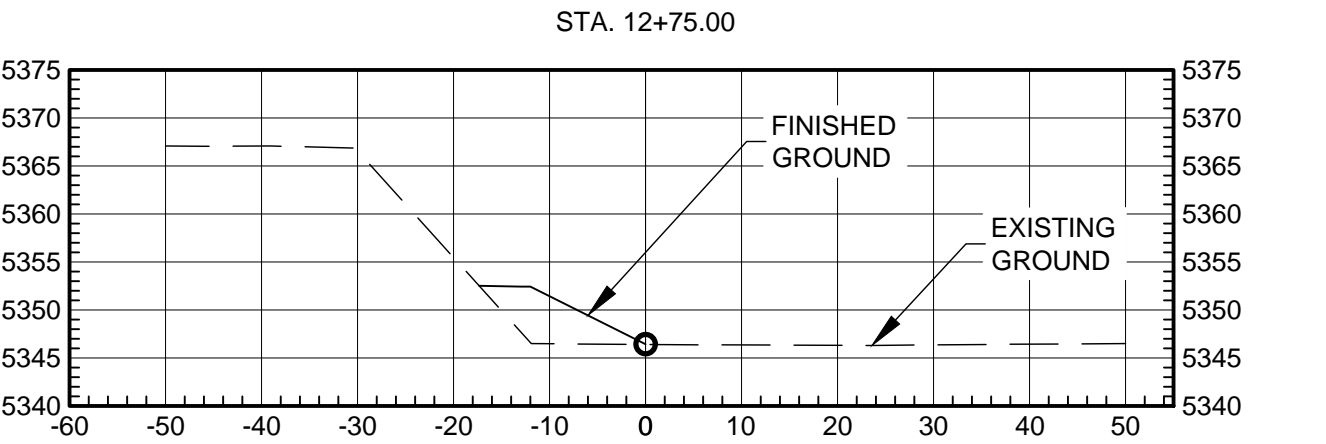
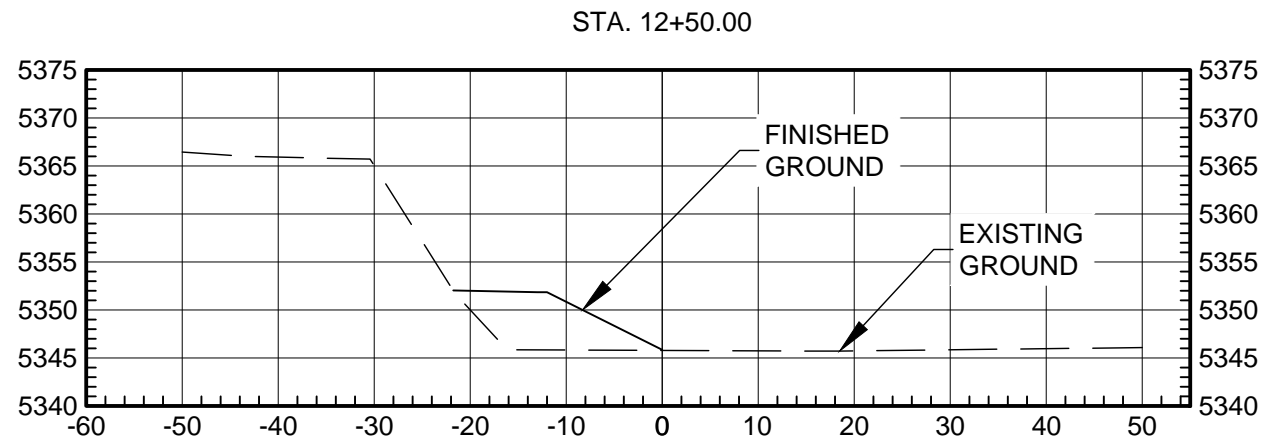
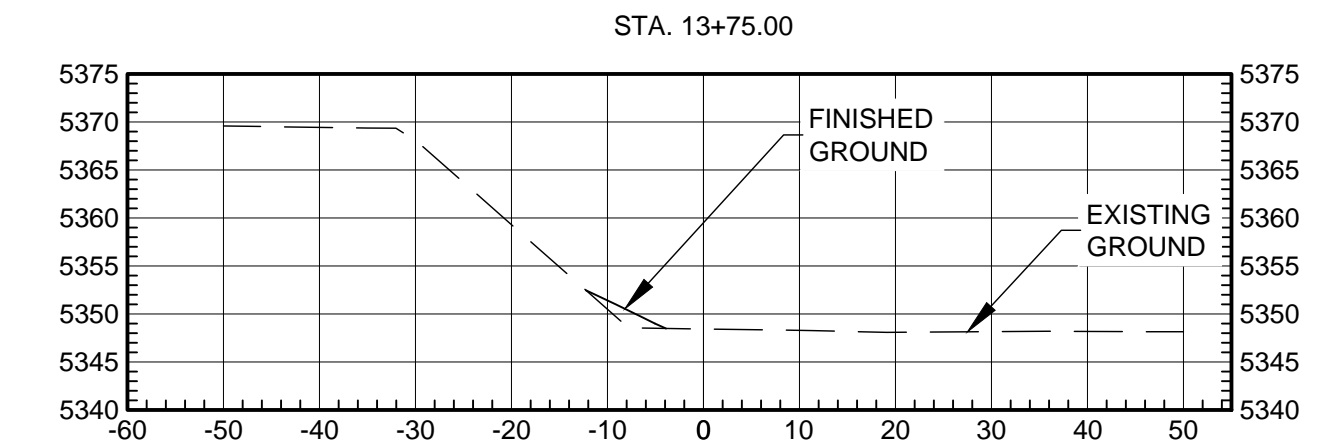
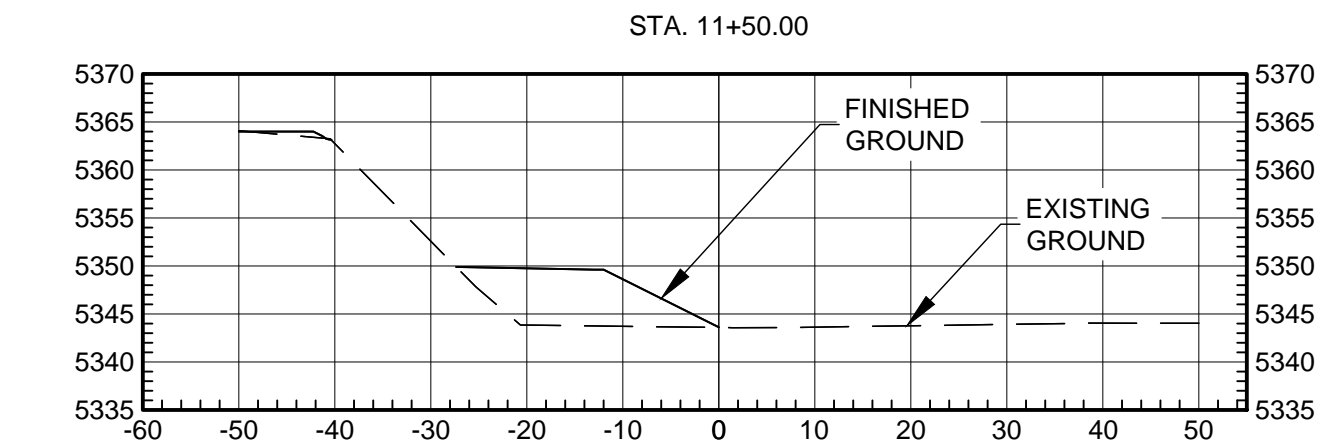
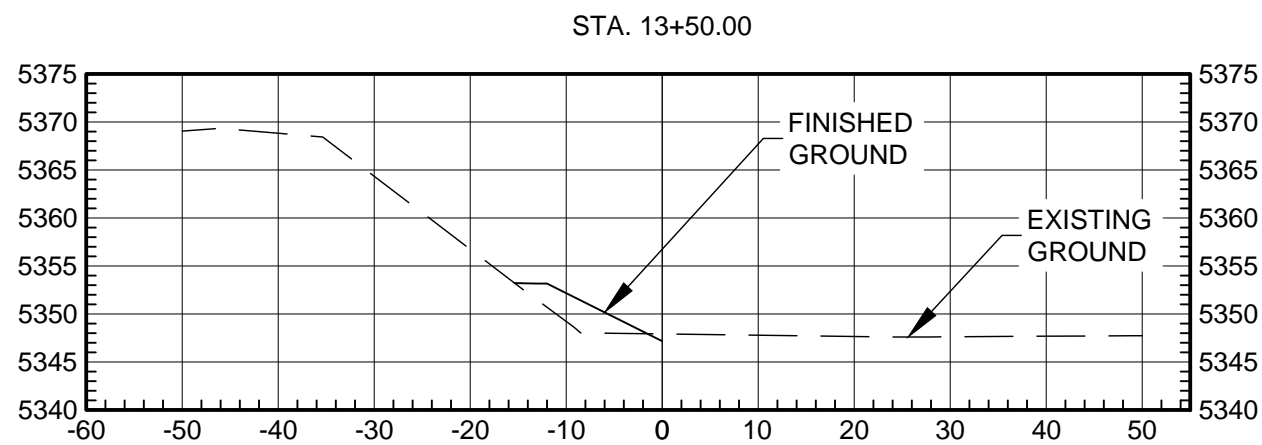
PROJECT NO: 18-600-013-00  
 DESIGNED BY: DMD  
 DRAWN BY: JEM / MTR  
 CHECKED BY: DMD  
 DATE: DECEMBER 2018

SHEET TITLE  
**WEST WALL  
 PLAN & PROFILE**

SHEET NO:  
**C-302**

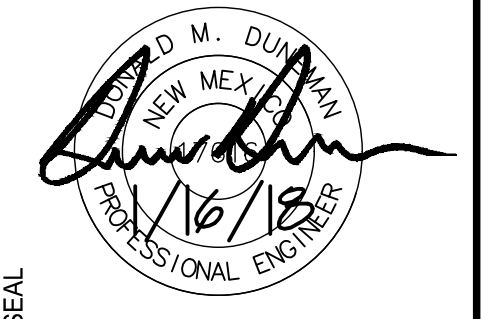
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### WEST WALL



**WILSON & COMPANY**  
 2600 THE AMERICAN RD. SE SUITE 100  
 RIO RANCHO, NM 87124  
 PHONE: 505-898-8021  
 FAX: 505-898-8501  
 www.wilsonco.com

CONSULTANTS



SEAL

PROJECT NAME

**BLACK ARROYO TRAIL  
 BRIDGE SCOUR  
 PROTECTION PROJECT  
 RIO RANCHO, NM**

REV.	DATE	DESCRIPTION	BY

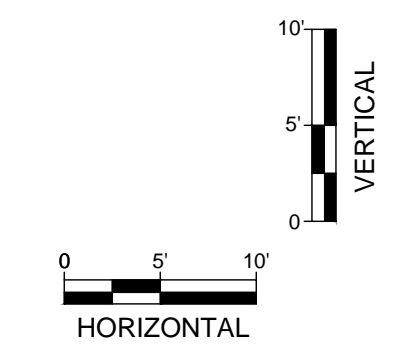
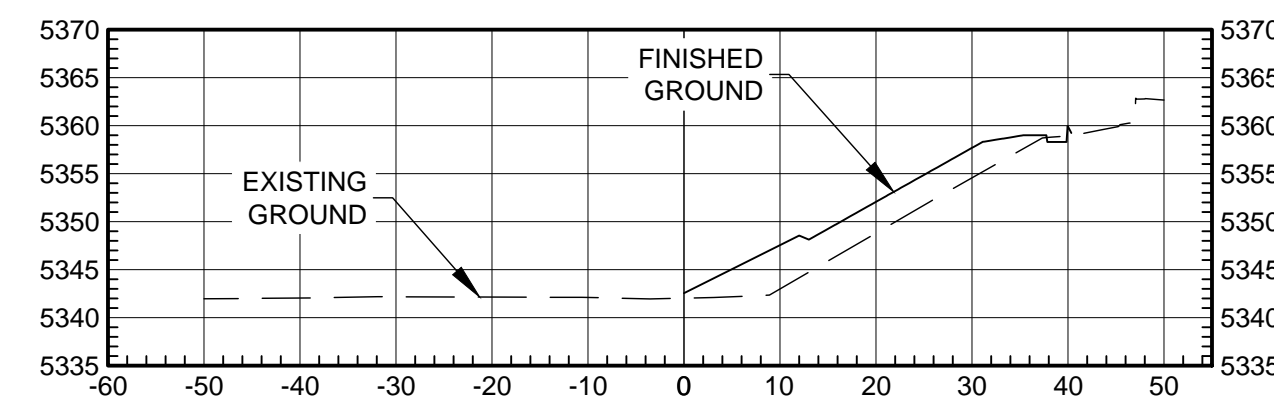
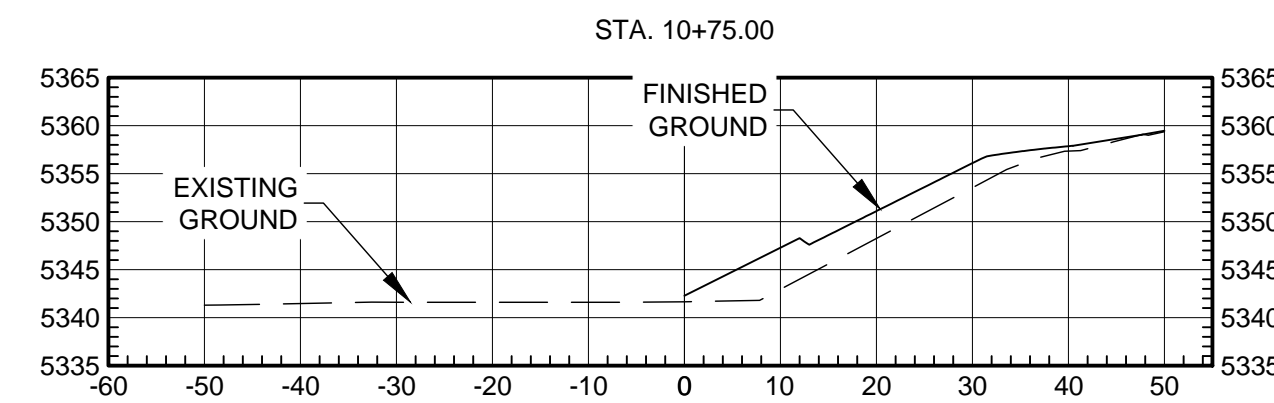
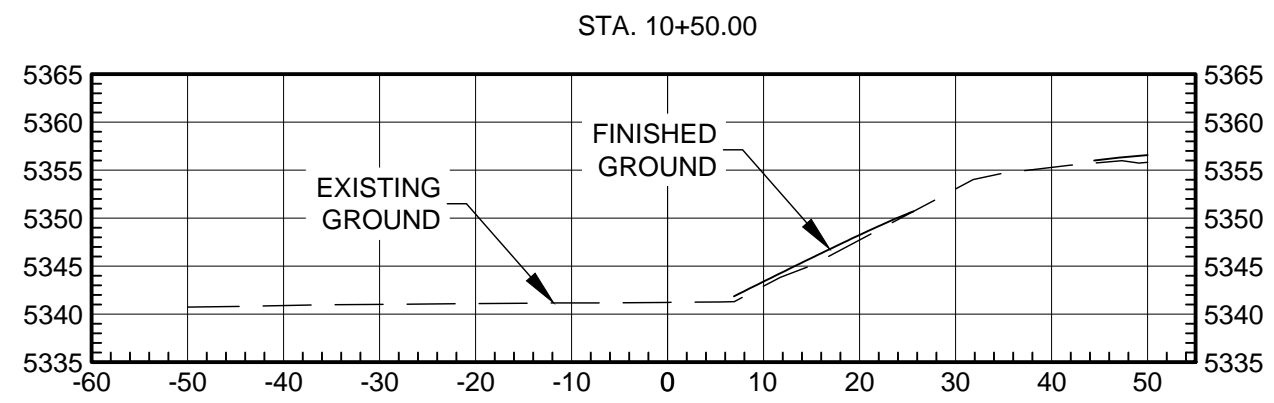
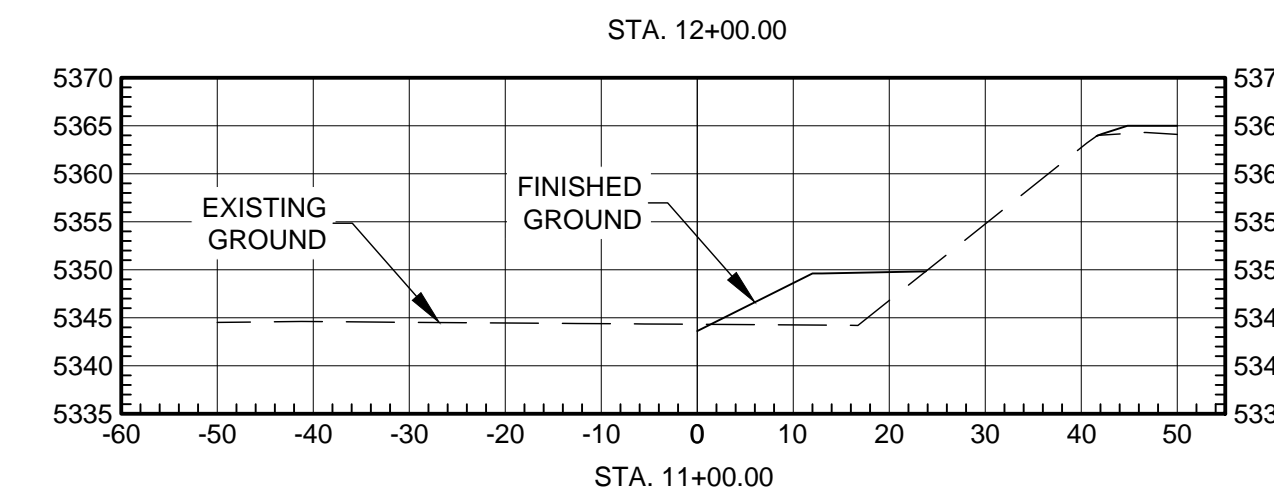
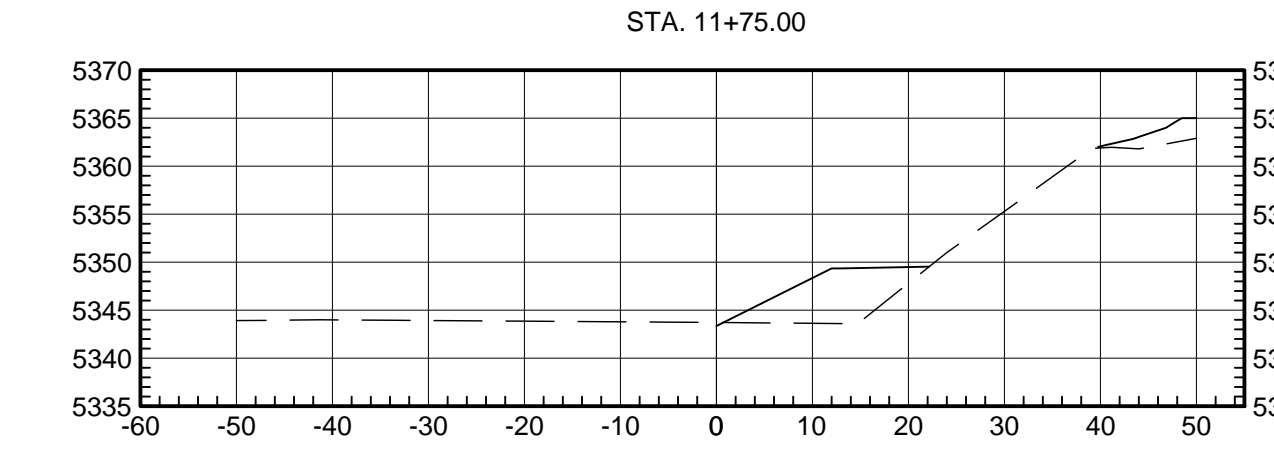
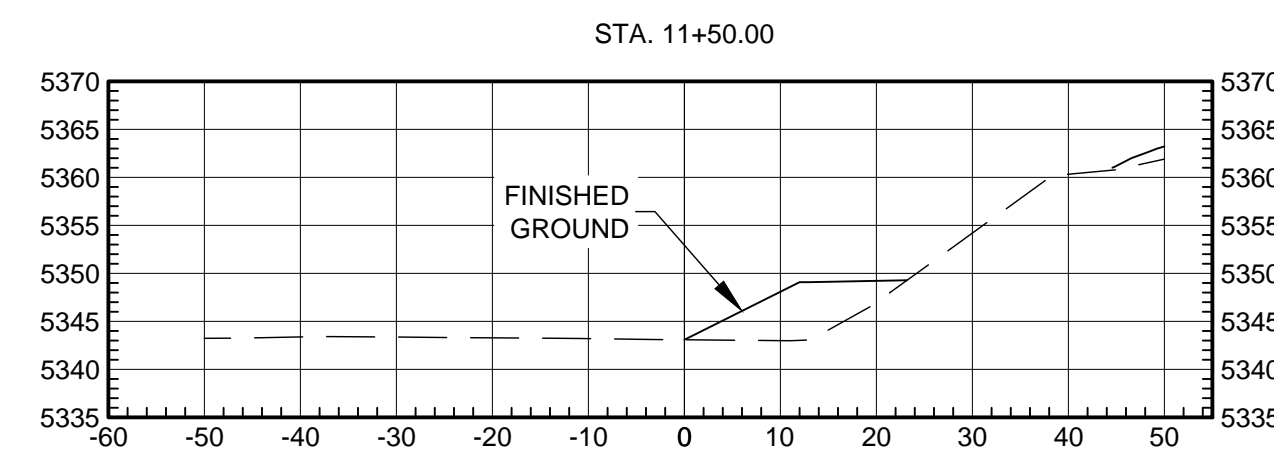
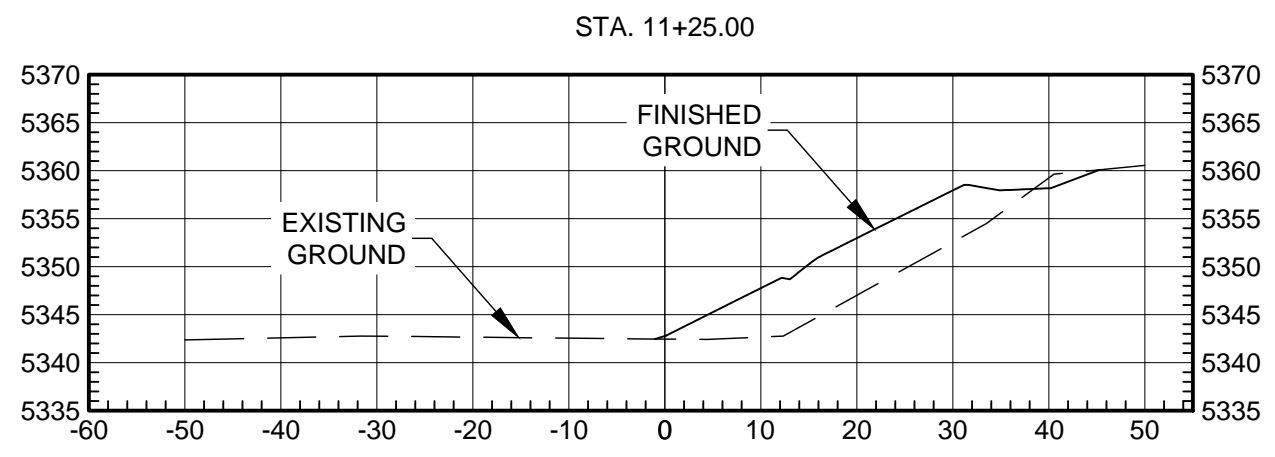
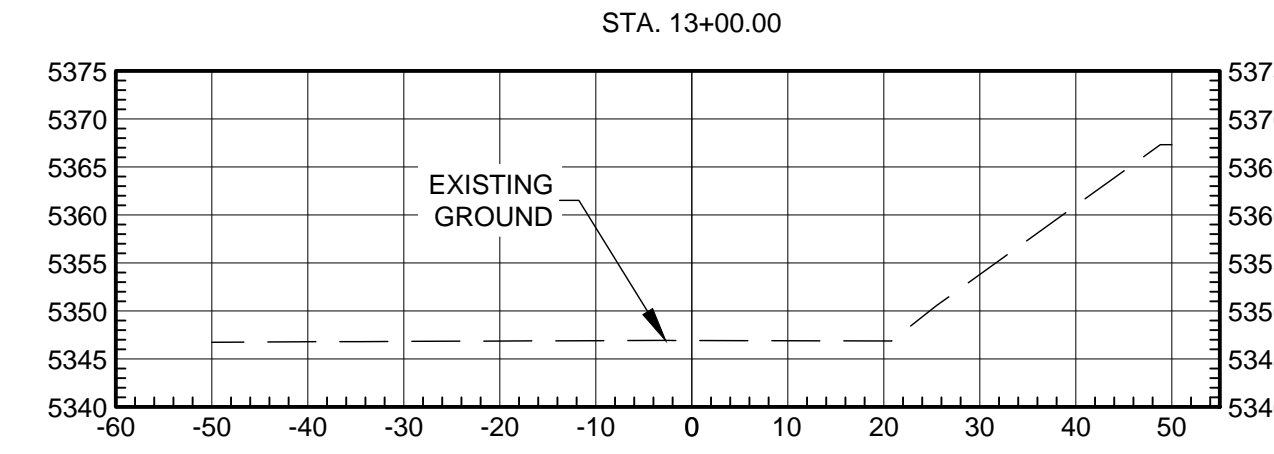
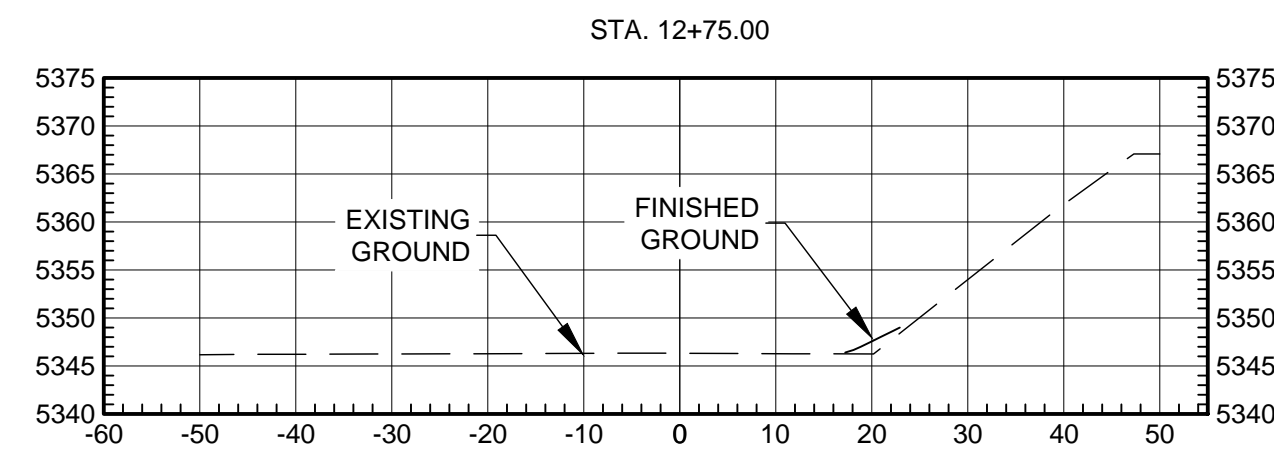
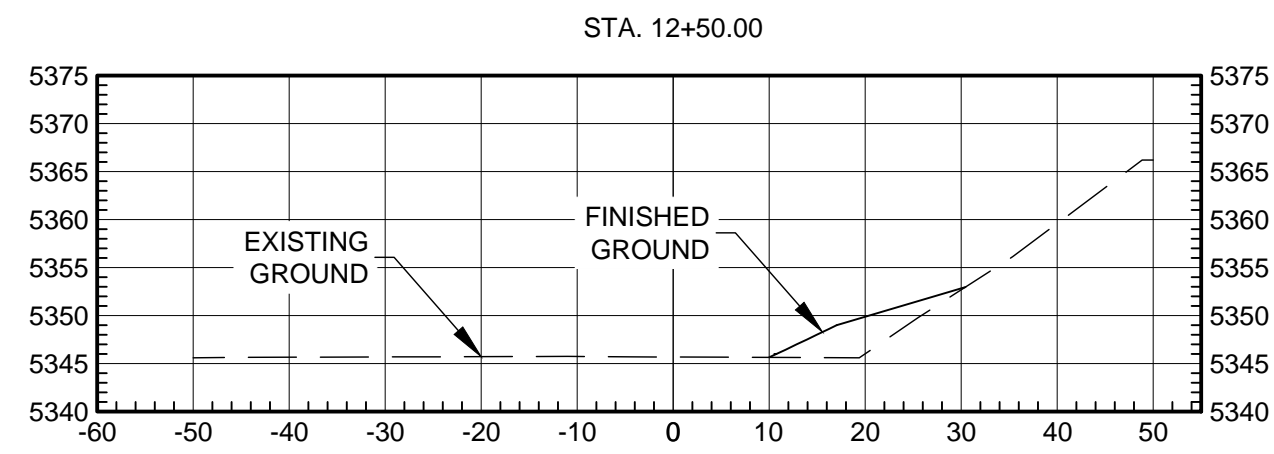
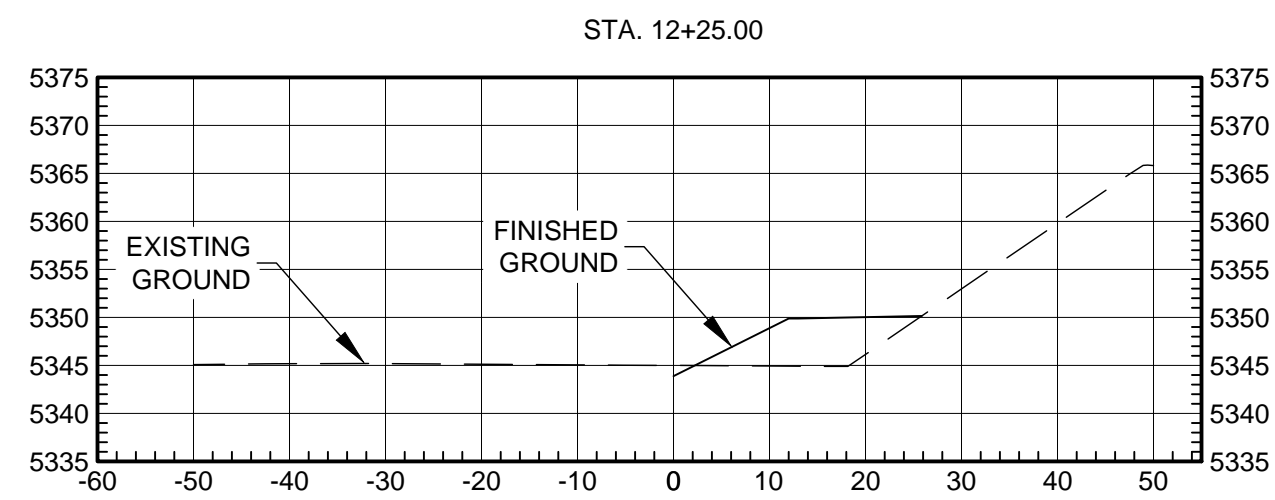
PROJECT NO: 18-600-013-00  
 DESIGNED BY: DMD  
 DRAWN BY: JEM / MTR  
 CHECKED BY: DMD  
 DATE: DECEMBER 2018

SHEET TITLE  
**CROSS SECTIONS  
 WEST WALL**

SHEET NO:  
**C-401**

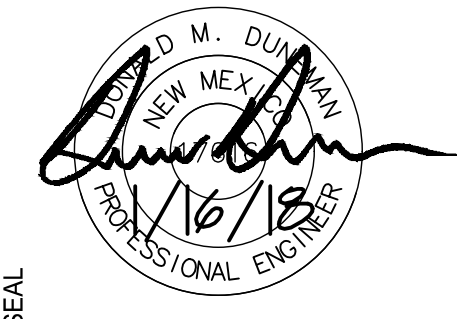
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EAST WALL



**WILSON & COMPANY**  
2600 THE AMERICAN RD. SE SUITE 100  
RIO RANCHO, NM 87124  
PHONE: 505-898-8021  
FAX: 505-898-8501  
www.wilsonco.com

CONSULTANTS



SEAL

PROJECT NAME  
**BLACK ARROYO TRAIL  
BRIDGE SCOUR  
PROTECTION PROJECT  
RIO RANCHO, NM**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 18-600-013-00  
DESIGNED BY: DMD  
DRAWN BY: JEM / MTR  
CHECKED BY: DMD  
DATE: DECEMBER 2018

SHEET TITLE  
**CROSS SECTIONS  
WEST AND  
EAST WALL**

SHEET NO:  
**C-402**